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AMSAT NEWS SERVICE
ANS-236

The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org.

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SB SAT @ AMSAT $ANS-236.01
ANS-236 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 236.01
 >From AMSAT HQ KENSINGTON, MD.
DATE August 24, 2014
To All RADIO AMATEURS
BID: $ANS-236.01

AMSAT Space Symposium Auction Announced

At this year’s AMSAT Space Symposium, we are trying a few new things and we hope you will enjoy them. One exciting facet we are adding this year is an auction. All proceeds from the auction will support AMSAT’s two major initiatives—the development and launch of the FOX satellite series and the ARISS program.

As we prepare for the auction, we are asking for your help in donating specialty items for auction (minimum value $100) that will attract symposium attendee’s attention and get them bidding up the item price. If you have any items that are ham related (no boat

anchors please), items of historical value, space related and/or autographed items, or even sports tickets or time shares, we would love to get your donations. Think out of the box on this—what exciting things would you like to see in this auction?

If you have something to donate to the Symposium auction, please send an e-mail to Frank Bauer, KA3HDO, who will work with you on getting your item or items into the auction. Frank's e-mail address is ka3hdo(a)verizon.net

This auction, while adding a fun experience to the AMSAT Space Symposium experience, will also serve to keep amateur radio's spirit thriving in space through its donations to FOX and ARISS.

On behalf of AMSAT, I thank you for your donations in advance. And I encourage each of you to attend and participate in this year's AMSAT Space Symposium to be held in Baltimore Maryland Oct 10-12. For more information, see:
http://www.amsat.org/?page_id=1555

73 from Your Symposium Committee Co-Chairs:

Frank Bauer, KA3HDO and Janet Bauer

[ANS thanks the Frank, KA3HDO and AMSAT-NA for the above information]

ISS Slow Scan TV on August 27

Dmitry Pashkov R4UAB reports that the Slow Scan Television (SSTV) experiment MAI-75 on the International Space Station (ISS) may be active on Wednesday, August 27 using the call sign RS0ISS on 145.800 MHz FM.

A Google English translation of the work plan says "On Gagarin from Space". Open gear with ISS RS by amateur radio link to ground receiving stations amateurs around the world images of photographs devoted to the life and work of the first cosmonaut Yuri Gagarin.

It is unclear how long the SSTV transmissions will continue for but the plan shows the Kenwood TM D-700 transceiver being used for a school contact in the Ruzaevo district on Saturday, August 30.

All you need to do to receive the SSTV pictures from the space station is to connected the audio output of a scanner or amateur rig via a simple interface to the soundcard on a Windows PC or an Apple iOS device, and tune in to 145.800 MHz FM. You can even receive pictures by holding an iPhone next to the radio's loudspeaker.

The ISS puts out a strong signal on 145.800 MHz FM and a 2m handheld with a 1/4 wave antenna will be enough to receive it. The FM transmission uses 5 kHz deviation which is standard in much of the world.

Many FM rigs in the UK can be switched been wide and narrow deviation FM filters so select the wider deviation. Handhelds all seem to have a single wide filter fitted as standard.

On Windows PC's the free application MMSSTV can be used to decode

the signal, on Apple iOS devices you can use the SSTV app. The ISS Fan Club website will show you when the space station is in range.

Listen for the ISS SSTV transmissions online using the SUWS WebSDR, further details at
http://amsat-uk.org/2014/08/15/suws-websdr-moves-to-new-site/

For more on Slow Scan Television SSTV, see this article SSTV – The Basics
http://www.essexham.co.uk/sstv-the-basics

How to be successful with the ISS Slow Scan Television (SSTV) imaging system
http://www.marexmg.org/fileshtml/howtoissstv.html

Information on the MAI-75 SSTV experiment
http://www.energia.ru/eng/iss/researches/education-26.html

Free MMSSTV software
http://hamsoft.ca/pages/mmsstv.php

iOS SSTV App
https://itunes.apple.com/gb/app/sstv/id387910013

IZ8BLY Vox Recoder, enables you to record the signals from the ISS on 145.800 MHz while you're away at work
http://antoninoporcino.xoom.it/VoxRecorder/

ARISS Slow Scan TV (SSTV) Blog and Gallery
http://ariss-sstv.blogspot.co.uk/

For real-time tracking and the latest status of amateur radio activity on the space station see the ISS Fan Club
http://www.issfanclub.com/

Dmitry Pashkov R4UAB
http://r4uab.ru/?p=7237

ISS Work Plan
http://www.mcc.rsa.ru/plan.htm

[ANS thanks AMSAT-UK for the above information]

Lambda-Sat CubeSat – ISS Deployment

Lambda-Sat was launched to the International Space Station (ISS) from the Wallops Flight Facility in Virginia on July 13, 2014, in an Orbital Sciences' Antares rocket CRS-2/ORB-2. It is reported it may be deployed from the ISS on Tuesday, August 26.

The Lambda team encourages amateur radio operators around the world to listen for and report the Lambda-Sat signal.

Frequency: 437.462 MHz
Downlink: AX.25 Unnumbered Information (UI) packets at 1200 bps AFSK
Transmission Power : 1W
Call Sign : KK6DFZ

The Secretary of the Cyprus Amateur Radio Society (CARS) Nestor 5B4AHZ has written an article on Lambda-Sat, he says:

The naming of the ?-sat satellite came from the Greek letter L (lambda) a reminder of Hellas, Helios, the Greek word Thalassa for sea, the Greek word Lithos which directly translates to stone (meaning “Land of Light”).

The ?-sat was constructed entirely of Greek volunteers who worked feverishly, selflessly and without any personal gain. Members of ?-sat contributed to the construction of the satellite system each with their knowledge in robotics, electronics, software development and telecommunications. The group consists of young people from Greece who traveled to Silicon Valley in California to participate in this project.

“I want to motivate the youth in Greece to continue to dream,” says the original initiator of the project, Periklis Papadopoulos, Professor of Aerospace Engineering of the Federal University of California San Jose, which has been awarded from NASA for his contribution with the prize Turning Goals Into Reality (TGIR). As the professor states, “My goal is to demonstrate the capabilities of young people in Greece.” The professor believes that our country could be active in this area and this is not an economic issue, but a question of will alone (!).

Submit reception reports of Lambda-Sat at http://lambdasat.com/?page_id=181

Lambda-Sat
http://lambdasat.com/

Article on Lambda-Sat by Nestor 5B4AHZ
http://www.cyhams.org/index.php/en/news-and-events/359-the-first-greek-microsatellite-is-a-fact

[ANS thanks AMSAT-UK for the above information]

W1AW/7 on satellites starting Wednesday (UTC time)

Following the schedule for W1AW/x portable activity during 2014, next week will start the second of the two weeks W1AW/7 will air from Arizona. The first W1AW/7 Arizona satellite activity in March was successful (thanks, John K8YSE, for making good use of the K8YSE/7 station in Arizona that week), and I'm hoping for another successful week starting at 0000 UTC Wednesday, 27 August (2000 EDT/1700 PDT on Tuesday, 26 August).

I will be operating as W1AW/7 on weeknights, and plan on more activity during the Labor Day weekend (30 August-1 September) that falls within this one-week period. I am working on having additional operators for the weekday passes, when I won't be able to get on the radio myself. As with any of the W1AW/x activities, ARRL will handle the QSLing. ARRL will upload all W1AW/7 logs to Logbook of the World, in addition to the paper, QSL cards that will be available later.

If you also work other bands and want to work W1AW/7 from Arizona next week, the W1AW/7 Arizona activity coordinator, Ned Stearns AA7A,

has a schedule showing when the other stations operating as W1AW/7 will be on - and on what band/mode combinations. This schedule is still being assembled, so more slots will be filled in as we get closer to next week.

You can see that schedule at:
http://aa7a.net/W1AW/W1AW_7_AZ_1September.htm

Satellite operating times will not appear on Ned's schedule, as I am coordinating that part of the W1AW/7 effort. I'll use the AMSAT-BB list and my Twitter @WD9EWK feed (http://twitter.com/WD9EWK) to send out updates for the W1AW/7 satellite activity.

Good luck, and 73!

[ANS thanks Patrick WD9EWK/VA7EWK and AMSAT-NA for the above information]

Venerable LUSAT-1 (OSCAR 19) Takes to the Dark Side

Set to celebrate its silver anniversary next year, LUSAT-1 -- which is also known as OSCAR 19 or LO-19 -- appears once again to be functioning, sort of, when not in sunlight. At this point, OSCAR 19 is only transmitting telemetry; its digital transponder has not been reported to be operational.

"We knew that our LUSAT started transmitting again a couple of years ago, but only when illuminated by sunlight and was not heard during the night," Pedro Converso, LU7ABF, reported to the AMSAT-BB. During a recent nighttime pass, though, he was surprised to hear "the usual strong 900 mW continuous carrier on 437.125 MHz," 22 minutes after LO-19 had emerged from Earth's shadow.

"It's almost a miracle that after almost 25 years, LUSAT's vintage Ni-Cd batteries can receive and hold [a] charge," he said.

Launched in 1990 from Kourou, French Guyana, on an Ariane 4 vehicle, the satellite -- Argentina's first -- has completed more than 128,000 orbits, and is one of the oldest active Amateur Radio satellites. The satellite carries a digital store-and-forward packet transponder with uplink frequencies at 145.84, 145.86, 145.88, and 145.90 MHz 1200 bps FM, with AX.25 protocol downlink at 437.125 MHz SSB.

An audio clip, tracking information, and listener reports are available via the AMSAT-LU website. Reports are welcome via e-mail.

[ANS thanks ARRL & AMSAT-BB for the above information]

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73 on 73 Award Announcement

Paul Stoetzer N8HM has announced a new award for contacts made via the AO-73 (FUNcube-1) amateur radio satellite

"I am pleased to announce that I will be sponsoring a new award to promote activity on AO-73 (FUNcube-1). The requirements for this award are simple:

1. Work 73 unique stations on AO-73.
2. Contacts must be made on or after September 1, 2014.
3. There are no geographic restrictions on your operating location.

There will be no cost for this award (donations to AMSAT-UK and AMSAT-NA's Fox program are encouraged though). No QSLs are required. When you complete the requirements, email your log extract including the callsign of each station worked, time GMT, and date to n8hm(a)arrl.net as well as the address where you'd like the award certificate sent.

Enjoy AO-73's transponder!

73 Paul Stoetzer, N8HM
Washington, DC"

[ANS thanks Paul, N8HM and AMSAT-UK the above information]

Chasqui-1 deployment from ISS

On August 18, 2014 at 14:00 UT the Russia Cosmonauts on the International Space Station (ISS), Alexander Skvortsov and Oleg Artemyev, opened the hatches of the Pirs docking module and to start Extra Vehicular Activities (EVA).

One of their tasks was the deployment of the Peruvian satellite Chasqui-1, a research satellite designed to standard CubeSat dimension by the Peruvian National University of Engineering (Universidad Nacional de Ingenieria (UNI)) in collaboration with the Southwestern State University (SWSU) in Kursk.

Chasqui-1's batteries were charged by the Russian Cosmonuats inside the ISS during August 14/15.The satellite was successfully deployed by Oleg Artemyev near the start of the EVA at 14:23 UT.

Chasqui-1 was developed with the intention of improving their satellite technology through the design and testing of a small satellite. Its facilities include two cameras, one in visible and the other in infra-red. Other facilities include communication in the amateur radio band and control systems for its power, thermal and embedded management of its components.

Chasqui-1 will provide a number of functions that include taking pictures of the Earth. From an academic perspective it will facilitate collaborations among various faculties and research centres of the university to train students and teachers with real world experience in satellites. It will also generate opportunities to work with other universities in the world which in turn will lead to technological advances in the aerospace industry of Peru.

The 437.025 MHz beacon (+/- 10 kHz Doppler shift) can transmit either 1200 bps AFSK AX.25 or 9600 bps GMSK. At the time of writing no signal from the beacon had been heard.

Listen for Chasqui-1 and the ISS online using the SUWS WebSDR,
further details at
http://amsat-uk.org/2014/08/15/suws-websdr-moves-to-new-site/

Find out when you can hear the ISS and Chasqui-1 which is currently
in close proximity at
http://issfanclub.com/

Chasqui-1
http://www.chasqui.uni.edu.pe/eng.html

Facebook
https://www.facebook.com/pages/Chasqui-1/253013641985

Twitter @chasqui1

R4UAB Chasqui-1
http://r4uab.ru/?p=7178

[ANS thanks AMSAT-UK for the above information]

AMSAT Events

Information about AMSAT activities at other important events around
the country. Examples of these events are radio club meetings where
AMSAT Area Coordinators give presentations, demonstrations of working
amateur satellites, and hamfests with an AMSAT presence (a table with
AMSAT literature and merchandise, sometimes also with presentations,
forums, and/or demonstrations).

* Saturday, 30 AUG 14 @ 1330 EDT: AMSAT Forum at the Shelby, NC
Hamfest (ARRL North Carolina State Convention)
"Amateur Radio Satellite Overview"
AMSAT President Barry Baines, WD4ASW and AMSAT Area Coordinator John
Kludt, K4SQC will discuss AMSAT's Fox-1 class cubesat projects
currently under development; two of these satellites are expected to
be launched in 2015. They will also cover the basics in getting
started in amateur satellites and note other recently launched
amateur spacecraft, such as AMSAT-UK's FUNCube-1 and FUNCube-2.
* Friday through Sunday, 12-14 September 2014 – ARRL Southwestern
Division Convention 2014 in San Diego CA (near Montgomery Field and I-
805/CA-163 interchange)
* Sunday, 25 October 2014 – Hamfest Chattanooga 2014 in
Chattanooga TN (Alhambra Center, near TN-320 and I-75 exit 3)
* Saturday, 8 November 2014 – Tucson Hamfest 2014 in Marana AZ
(along I-10 west frontage road, east of exit 236)
* Saturday, 6 December 2014 – Superstition Superfest 2014 in Mesa
AZ (Mesa Community College, Dobson Road between Southern Avenue & US-
60 exit 177)
* Saturday, 10 January 2015 – Thunderbird Hamfest in Phoenix AZ
(43rd Avenue, between Greenway and Bell Roads)
* Friday and Saturday, 20-21 February 2015 – Yuma Hamfest in Yuma
AZ (Yuma County Fairgrounds, 32nd Street between Pacific Avenue &
Avenue 3E, south of I-8 exit 3)

[ANS thanks AMSAT-NA for the above information]

ARISS News

Upcoming Contacts

* A telebrdige contact via IK1SLD with students at SPACE KAMP Sterrenlab, Noordwijk, The Netherlands is a go for Tue 2014-08-26 11:36:32 UTC 65 deg.

The Amicale Space Camp includes 25 children aged 8-13 years old of different European nationalities. It includes children of the European Patent Office staff and takes place in Noordwijk (Stay Okay hostel) from the 25th to the 29th of August 2014. All camp activities are designed to entertain children, stimulate their creative and manual skills, and teach them about science and space. The contact with the International Space Station will be a key activity in the program as it gives the children the opportunity to talk with an astronaut and understand that space is an international endeavor.

* A direct contact with students at Winfree Bryant Middle School, Lebanon, TN, USA is scheduled for Tue 2014-08-26 16:12:47 UTC 24 deg.

As one of two middle schools in Lebanon Special School District, Winfree Bryant Middle School is in its fourth year of serving students in grades 6 – 8. Located in Wilson County in the heart of middle Tennessee twenty-eight miles east of Nashville, the city of Lebanon has approximately 27,000 residents. Winfree Bryant serves approximately 600 students with 66.5% Caucasian, 16.6% African American, 14.4% Hispanic, 2% Asian, and less than 1% Native American/Mixed Race. Forty-eight percent of the school population is female and fifty-two percent of the population is male. Approximately 65% of students fall within the demographics of economically disadvantaged.

Winfree Bryant’s mission statement is “Different and Making a Difference.” As a school family, that is what teachers and staff set out to do on a daily basis. Although our number one responsibility is to teach Tennessee State Standards and grow students academically, we first love our children and provide for their daily needs. Without relationship, there can be no learning, and our teachers and administrators take very seriously the mission of making a difference in the lives of the children and families we serve.

The faculty and staff embodies this mission by never giving up on a child – academically, emotionally, and socially. Expectations for academics are high and behavioral expectations are rigorous in order to best support a positive learning environment. In return, we look forward to a harvest of hardworking responsible citizens who then make a difference in a positive way to our community.

* A direct contact with students at Dorothy Grant Elementary School, Fontana, CA, USA is scheduled for Wed 2014-08-27 18:31:28 UTC 83 deg.

Dorothy Grant Elementary School opened its doors in August 2004 and was named after a local prominent, nationally renowned civil rights

leader who passed away in April 2013. Mrs. Grant was vested in education, and could be seen most mornings at our school gates welcoming our students to school.

Our school is a community school located in the middle of a residential neighborhood and serves over 780 students in preschool through grade 5. We also have an early childhood special education program and Special Day Class for 5th grade students. Many of our students participate in our after-school program, as well as a variety of school clubs that are headed by teachers or parents, such as the gardening club.

Dorothy Grant Elementary School proudly earned the California Department of Education’s 2013 Title I Academic Achievement Award and is a California Distinguished School. This prestigious honor is a reflection of the school’s system of support for all students at all learning levels. Innovative intervention strategies and differentiated instruction greatly impacted school-wide student performance to meet state and federal standards of excellence.

On October 27, 2012, the Dorothy Grant Elementary Amateur Radio Club was established. Each year nearly 50 students in the 4th and 5th grades learn about amateur radio and participate in activities and programs that teach them about electronics and radio communication techniques. Amateur radio has enhanced reading, writing, mathematics, geography, and communication skills for all students. The club recently installed a 50 ft. Rohn tower and beam antenna in hopes of making more international contacts on 10, 15, and 20 meters. The use of technology is strongly emphasized throughout the curriculum and used as a tool to enhance class lessons.

Latest News

* A telebridge contact with students at Zuni Hills Elementary School, Sun City, AZ, USA, via K6DUE was successful on Fri 2014-08-22 17:47:05 UTC. With the help of the Telebridge Operator, Jennifer, we had a very successful contact. All 18 questions plus several others were completed before an audience of about 850 at the school.

Zuni Hills Elementary School is a K-8th grade school and falls in the Peoria Unified School District. Our district is the third largest in the state of Arizona with 33 elementary schools and 7 high schools. Our district is celebrating its 125th anniversary this year. Our district has a 95% graduation rate and last year students accepted more than 50 million dollars in scholarships.

[ANS thanks ARISS, Keith, W5IU and Charlie, AJ9N for the above information]

Satellite Shorts From All Over

* A presentation on FUNcube CubeSat by AMSAT-UK scheduled for RSGB Convention

The RSGB say there will be lots of space and a five lecture stream programme in the new Convention venue at the Kents Hill Conference

Centre, Milton Keynes, MK7 6BZ.

Among the presentations are
- UKHASNET, technology and methodology by James Coxon M6JCX
- SDR Techniques by Simon Brown G4ELI
- Digital modes start up by Mike Richards G4WNC
- FUNcube CubeSat by AMSAT-UK
- Amateur radio software developers forum by G7VJR
- 146-147MHz: A New Frontier of Amateur Innovation by G4SWX
- World War 1 Communications by Dr Elizabeth Bruton

RSGB Convention
http://rsgb.org/main/about-us/rsgb-convention/

Schedule
http://rsgb.org/main/about-us/rsgb-convention/rsgb-convention-2014-provisional-timetable/

[ANS thanks AMSAT-UK for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
This week's ANS Editor,
Joe Spier, K6WAO
k6wao at amsat dot org